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TITLE: ORGANOMETALLIC COMPLEX STRUCTURE,
PROCESS FOR PRODUCING THE SAME AND CONTAINING

THE ORGANOMETALLIC...COMPLEX STRUCTURE

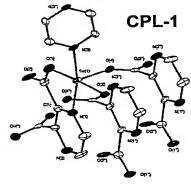
INVENTOR(S): SUSUMU KITAGAWA ET AL. APPLN. NO.: NEW APPLICATION

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## FIG. 1

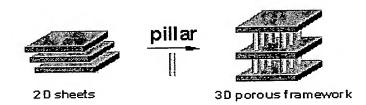
$$Cu(ClO_4)_2 \cdot 6H_2O + \bigvee_{N=COONa}^{N=COONa} + Pillar Ligand \longrightarrow \{[Cu_2(pzdc)_2(L)] \cdot xH_2O\}_n$$

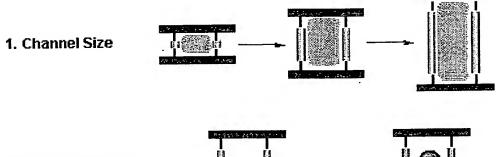
$$Na_2pzdc \qquad L = pyrazine$$



P21/c (No. 14) monoclinic Z = 2a = 4.693(3) Åb = 19.849(2)R = 0.062c = 11.096(2)Rw = 0.062 $\beta$  = 96.90(2)° V = 1026.1(6) Å3

## FIG. 2





## 2. Surface Property

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FIG. 3

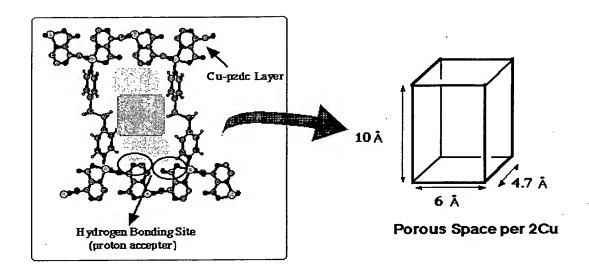
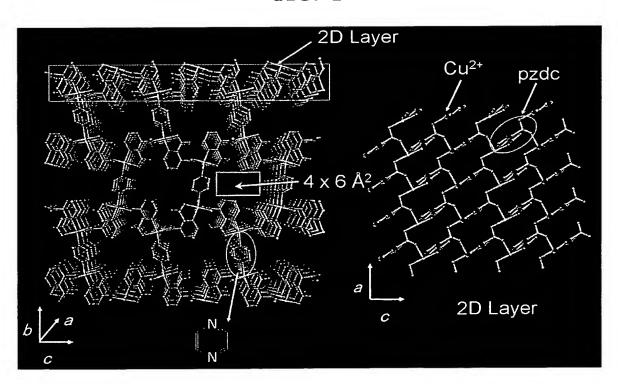


FIG. 4



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FIG. 5

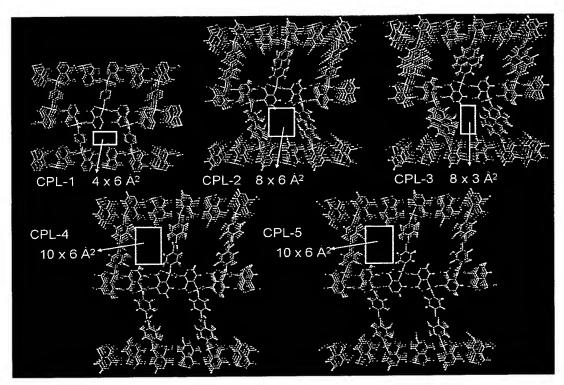
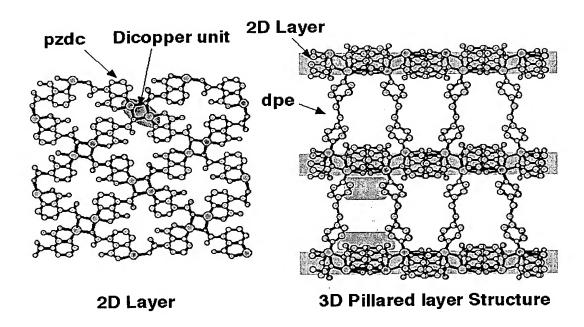


FIG. 6



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INVENTOR(S): SUSUAL KITAGAWA ET AL.

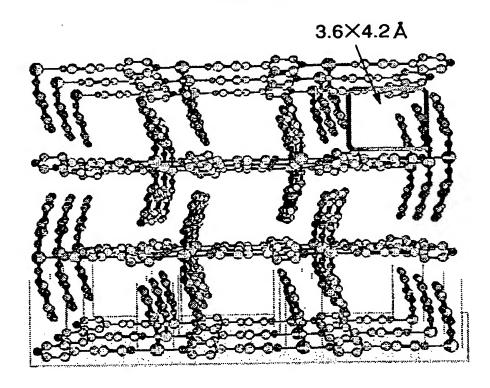
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FIG. 7

FIG. 8A



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FIG. 8B

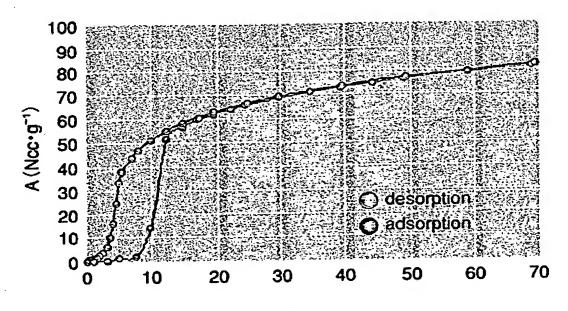
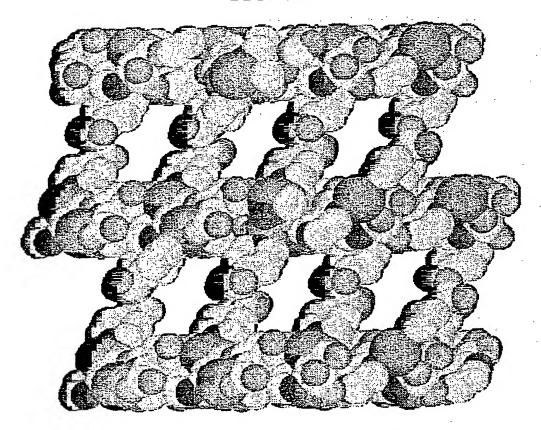


FIG. 9A



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FIG. 9B

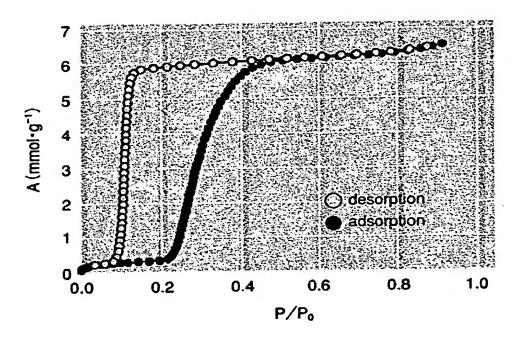
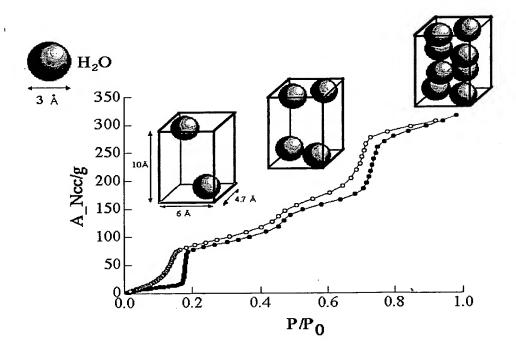


FIG. 10



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FIG. 11

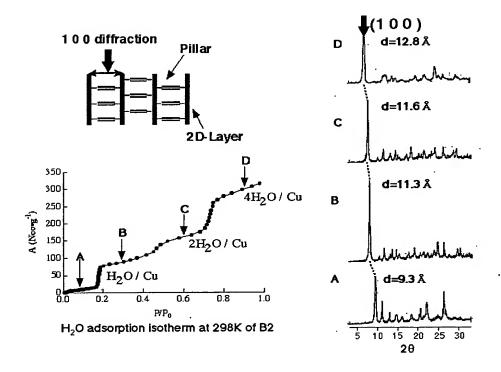
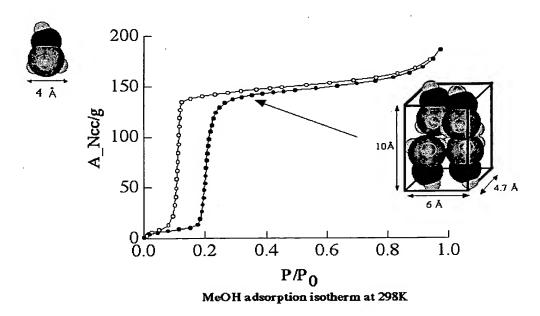


FIG. 12



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FIG. 13

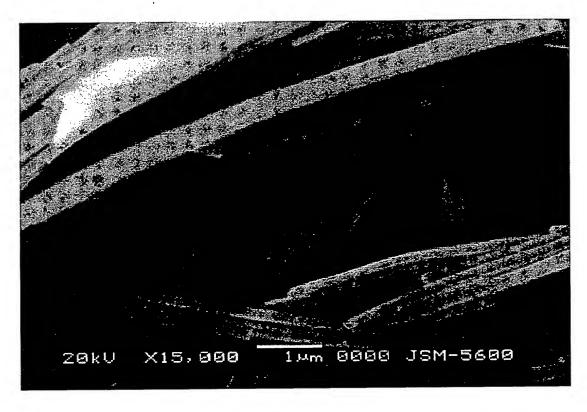
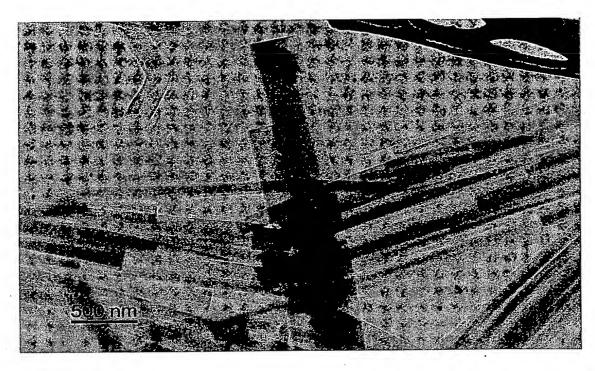


FIG. 14



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INVENTOR(S): SUSUMU KITAGAWA ET AL.
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FIG. 15

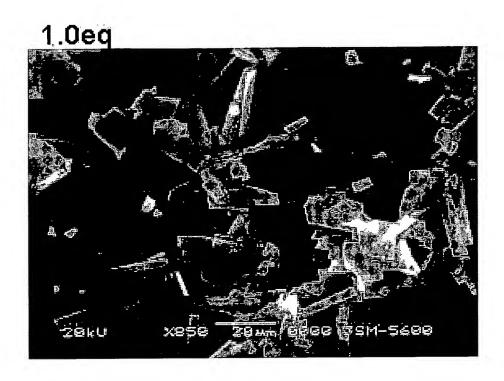
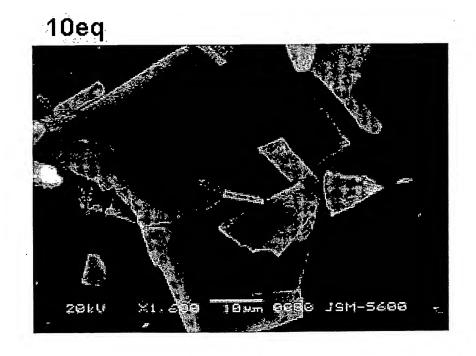


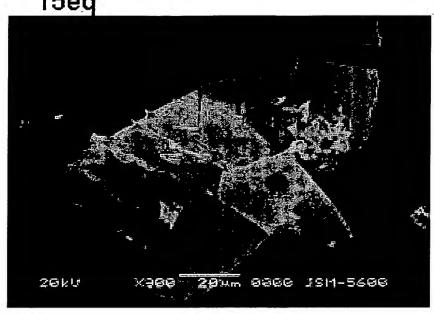
FIG. 16



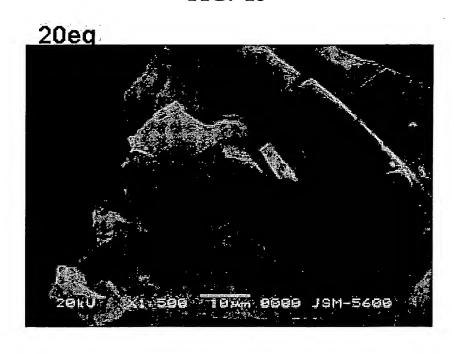
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FIG. 17

15eq



**FIG. 18** 



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INVENTOR(S): SUSUALULICATION
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THE ORGANOMETALLIC SUSUALULIC SUS

APPLN. NO.: NEW APPLICATION

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FIG. 19

**CPL-1** obtained without stirring

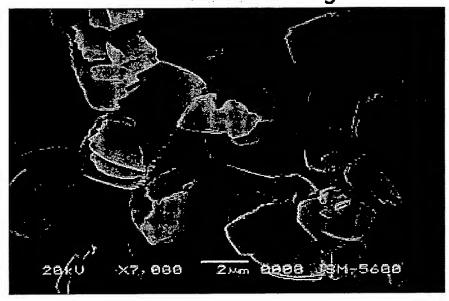
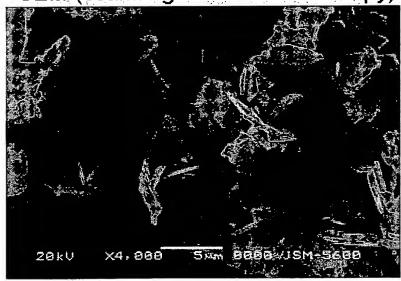


FIG. 20

SEM (scanning electron microscopy)

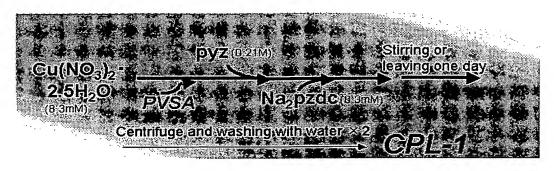


**CPL-1** obtained by one day stirring

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FIG. 21



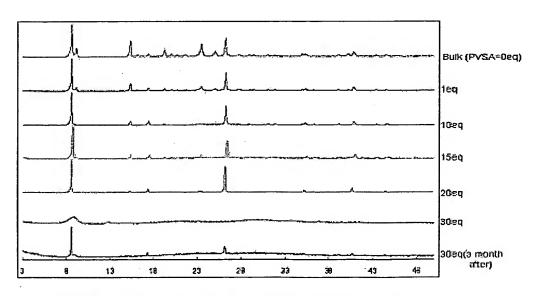
Poly(vinylsolfonic acid, sodium salt) (PVSA) =



pyz = pyrazine pzdc = pyrazine-2,3-dicarboxylic acid

[ PVSA = 0, 1.0, 5.0, 10, 15, 20, 25, 30eq ]

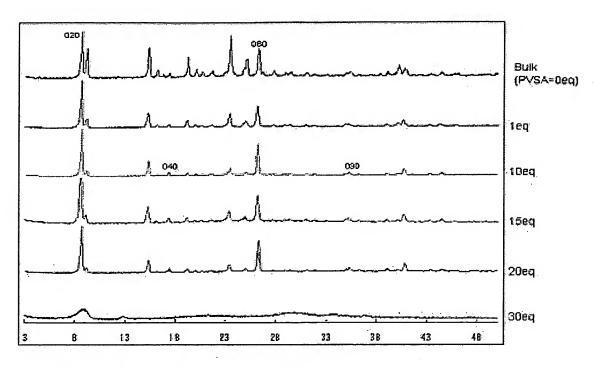
FIG. 22



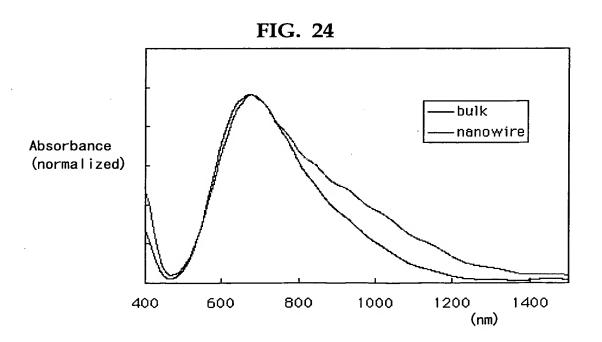
XRPD pattern of CPL-1 (without stirring)

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FIG. 23



XRPD pattern of CPL-1 (stirred sample)



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FIG. 25

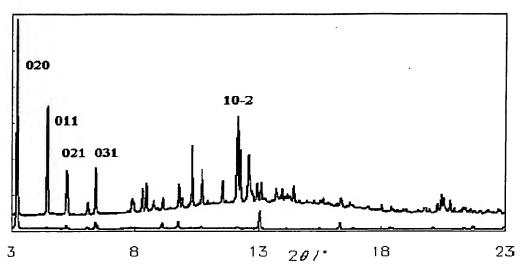
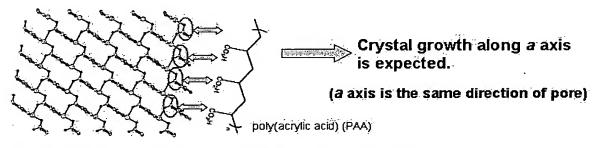
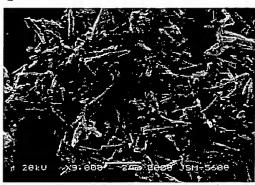


FIG. 26



**SEM** images





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FIG. 27

